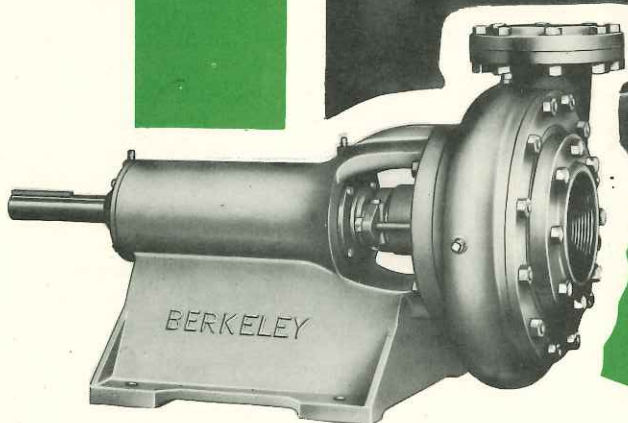


BERKELEY

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OVERHEAD IRRIGATION PUMPS

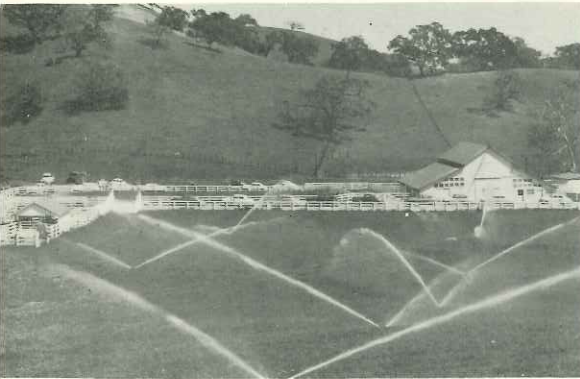


BERKELEY PUMP COMPANY

P. O. BOX 7—STATION A, BERKELEY 2, CALIFORNIA
556 TIFT AVENUE, S.W., ATLANTA, GEORGIA
P. O. BOX 5146, AMARILLO, TEXAS
P. O. BOX 492, YORK, NEBRASKA

BERKELEY

OVERHEAD IRRIGATION



Overhead irrigation systems require pumps capable of performing under severe operating conditions. When crops need water the pumping unit must deliver . . . usually on a "round the clock" basis. Sprinkling equipment, because it is moved often, must be rugged. The pump unit must function with efficiency and minimum attention. This type of service demands a pump designed specifically for this job - a pump that is sturdy, simple and dependable.

BERKELEY Overhead Irrigation Pumps have been recommended by leading Sprinkler System manufacturers and dealers for over a decade. Wherever BERKELEYS have been used, they have been found to provide top dependability and maximum economy. Simple construction and progressive engineering results in high efficiency. Rugged construction throughout assures users of maximum pump life - even under adverse conditions.

FEATURES OF BERKELEY OVERHEAD IRRIGATION PUMPS

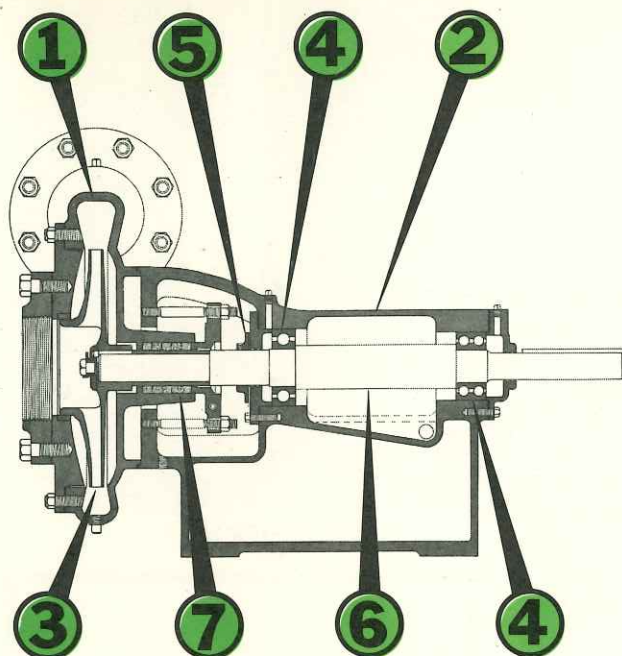
FLEXIBILITY: These pumps are available in a wide range of sizes to enable user to select a pump very close to his own operating conditions. Most models are available with choice of drives and mountings. Discharge position can be adjusted to suit need.

ECONOMY: Low initial cost plus low maintenance costs make BERKELEY Overhead Irrigation Pumps particularly attractive from an economy standpoint. Wearability through rugged construction adds years of life to these fine pumping units.

PERFORMANCE: Capacities range from 30 to 3500 GPM at heads to 85 lbs. per sq. in. The performance table at the bottom of Page 3 shows the flexibility of this line of pumps. There is an overlapping from model to model that permits the user to pin-point his conditions and select the pump to fit his needs. Exact performance figures for each pump may be obtained from Rating Curves which each BERKELEY Pump dealer maintains in his master catalog.

AUXILIARY EQUIPMENT: Berkeley Overhead Irrigation Pumps are available with two accessories that take the work out of priming. They are the Berkeley Han-Dee Primer and the Berkeley Automatic Priming Valve. Exhaust primers and safety shut down controls are also available for all engine driven models.

SPECIFICATIONS . . .



- 1 VOLUTE CASE:** Grey cast iron on all models with the exception of Models 5EERJ and 8NRJH which are of fabricated steel. Highest efficiencies are achieved through modern hydraulic design. This provides two great advantages to the users of Berkeley Pumps. 1. Lower operating costs. 2. Superior performance.
- 2 BRACKET:** Grey cast iron - Designed for maximum strength and rigidity. Pump case and ball bearing fits are machined concentric within a few thousandths of an inch. This provides extremely accurate alignment of the rotating element which is the key to many years of dependable, trouble free service.
- 3 IMPELLER:** One piece casting of the enclosed type; machined on all external surfaces and hand filed internally for top performance. Impellers are precision balanced to insure smooth, vibrationless operation. Berkeley offers an almost unlimited range of impeller sizes and designs to pin-point your exact pumping conditions.
- 4 BEARINGS:** Heavy duty double and single row ball bearings-grease lubricated. Larger models are equipped with oil lubricated taper roller bearings. Wide bearing spacing provides maximum shaft support and maintains accurate alignment of entire rotating element.
- 5 DRI-SEAL:** AN EXCLUSIVE BERKELEY FEATURE! This combination of a water slinger ring and labyrinth drip cap provides positive protection against the entrance of water into bearing housing.
- 6 SHAFT:** Stress proof steel shafts, protected by non-corrosive sleeve through stuffing box. Accurate machining and closely held tolerances insure proper fit and long life. Impeller is keyed to shaft and "double" locked securely in place by a special lock washer and cap screw - another exclusive Berkeley feature.
- 7 STUFFING BOX:** Extra deep to withstand the higher sprinkler pump pressures. Packing gland is of the split type, which may be removed to facilitate the addition of packing rings.

PERFORMANCE RANGE . . .

ROTATION
(Looking from shaft end)



MODEL NO.	SUCTION SIZE	DISCH. SIZE	ROTATION	GPM	HEAD IN FEET	H.P.
1-1/2ZRHC	2	1-1/2	CW	40 to 120	60 to 160	1-1/2 to 7
1-1/2ERD	2	1-1/2	CW	40 to 110	100 to 230	3 to 10
2WRLC	2-1/2	2	CW	40 to 110	40 to 130	1 to 4
2YRLD	2-1/2	2	CW	50 to 140	40 to 95	1 to 3
2ZRLD	2-1/2	2	CW	50 to 150	50 to 150	2 to 7-1/2
2ERLD	2-1/2	2	CW	80 to 200	60 to 190	3 to 12
2ERHD	2-1/2	2	CW	100 to 300	60 to 210	3 to 17
2-1/2YRD	3	2-1/2	CW	100 to 300	40 to 140	2 to 12
2-1/2ZRE	3	2-1/2	CW	100 to 300	60 to 170	3 to 15
2-1/2FRE	3	2-1/2	CW	100 to 240	80 to 210	5 to 17
3ERE	4	3	CW, CCW	200 to 550	60 to 180	7-1/2 to 30
3JRG	4	3	CW	150 to 350	120 to 330	10 to 40
4EREH	5	4	CW, CCW	300 to 700	70 to 180	10 to 40
4GRG	5	4	CW, CCW	350 to 800	80 to 180	15 to 40
4GRGH	5	4	CW, CCW	500 to 1100	60 to 200	10 to 60
5JRJ	6	5	CW, CCW	500 to 1200	90 to 190	20 to 60
5EERJ	6	5	CW, CCW	600 to 1200	100 to 400	30 to 150
6NRJ	8	6	CW, CCW	800 to 2000	120 to 210	30 to 100
8NRJH	10	8	CW, CCW	1500 to 3500	80 to 200	50 to 180

Loss of Head in Feet Per 100 Feet of Portable Sprinkler Pipe

G.P.M.	C.F.S.	2" O.D.	3" O.D.	4" O.D.	5" O.D.	6" O.D.	7" O.D.	8" O.D.	10" O.D.	12" O.D.
5	.01	.07								
10	.02	.32	.04							
20	.04	1.20	.15	.04						
30	.07	2.58	.32	.08						
40	.09	4.49	.56	.13	.04					
50	.11	6.85	.85	.20	.07	.03				
60	.13	9.67	1.21	.28	.09	.04				
70	.16	12.95	1.61	.38	.12	.05				
80	.18	16.70	2.06	.49	.16	.06	.03			
90	.20	20.80	2.58	.60	.20	.08	.04			
100	.22	25.40	3.18	.74	.24	.10	.05	.03		
120	.27		4.51	1.06	.34	.14	.07	.04		
140	.31		6.00	1.41	.46	.19	.09	.05		
160	.36		7.76	1.82	.59	.24	.11	.06		
180	.40		9.67	2.27	.73	.30	.14	.07		
200	.45		11.83	2.78	.89	.36	.17	.09		
220	.49		14.12	3.31	1.07	.44	.20	.11		
240	.54		16.72	3.91	1.27	.52	.24	.13		
260	.58		19.42	4.56	1.47	.60	.28	.15		
280	.62		22.40	5.26	1.71	.69	.33	.17		
300	.67		25.45	5.98	1.93	.79	.37	.19	.07	.03
350	.78			8.03	2.59	1.05	.50	.26	.09	.04
400	.89			10.36	3.33	1.35	.64	.33	.12	.04
450	1.00			12.90	4.15	1.69	.80	.41	.14	.05
500	1.12			15.73	5.07	2.06	.97	.50	.16	.06
550	1.23			19.12	6.16	2.50	1.18	.62	.19	.07
600	1.34			22.46	7.24	2.94	1.38	.72	.21	.09
650	1.45			26.10	8.42	3.41	1.62	.84	.26	.11
700	1.56				9.68	3.92	1.86	.97	.30	.13
750	1.67				11.05	4.46	2.11	1.10	.35	.15
800	1.79				12.48	5.03	2.38	1.24	.39	.17
850	1.90				13.95	5.64	2.67	1.39	.44	.19
900	2.01				15.65	6.35	2.98	1.56	.49	.21
950	2.12				17.35	7.02	3.32	1.73	.54	.23
1000	2.23				19.10	7.72	3.64	1.90	.60	.26
1100	2.46				22.85	9.22	4.37	2.27	.72	.30
1200	2.68				26.95	10.88	5.16	2.68	.85	.35
1300	2.90					12.62	5.96	3.10	.99	.40
1400	3.12					14.65	6.90	3.60	1.15	.46
1500	3.34					16.67	7.87	4.07	1.29	.53
1600	3.57					18.80	8.89	4.62	1.47	.60
1700	3.79					20.95	9.95	5.16	1.66	.67
1800	4.01					23.60	11.15	5.79	1.84	.75
1900	4.24						12.35	6.42	2.05	.83
2000	4.46						13.65	7.10	2.26	.92
2500	5.57								3.60	1.45
3000	6.68								5.10	2.05
3500	7.80								6.85	2.75
4000	8.91								8.83	3.57

(Above table computed for pipe with coupler)

To convert head in feet to pounds per square inch, divide by 2.31

To obtain friction loss on laterals with multiple outlets: Multiply friction loss in pipe by proper "F" Value to obtain actual loss in line.

(See University of California Bulletin No. 670 by J. E. Christiansen)

Number of Sprinklers	"F"	Number of Sprinklers	"F"
1	1.0	16	0.365
2	0.625	17	0.363
3	0.518	18	0.361
4	0.469	19	0.360
5	0.440	20	0.359
6	0.421	22	0.357
7	0.408	24	0.355
8	0.398	26	0.353
9	0.391	28	0.351
10	0.385	30	0.350
11	0.380	35	0.347
12	0.376	40	0.345
13	0.373	50	0.343
14	0.370	100	0.338
15	0.367		

EXAMPLE: If 500 GPM is pumped to 6 sprinklers on a 200 ft. line of 5" pipe, find the actual friction loss in the line. At 500 GPM, 5.07 will be the friction loss in 100 ft. of 5" pipe—10.14 in 200 ft. Multiply 10.14 by the proper "F" value (6 sprinklers) of .421 and the total friction loss is: 4.27 ft. or 1.9 lbs. per sq. in.



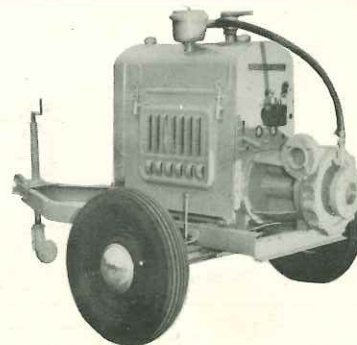
HAN-DEE PRIMER: The Berkeley Model 6 "Han-Dee Primer" is a positive displacement diaphragm type air pump designed specifically for priming purposes. Install the "Han-Dee Primer" on any centrifugal -- motor, engine, or belt drive, and those annoying priming problems will be eliminated -- permanently!



"B" LINE BELT DRIVE: Available in discharge sizes from 1-1/2" through 8" inclusive. Here's top quality at economy prices!



"B" LINE MOTOR DRIVE: Designed to give you the ultimate in a high quality, yet moderately priced, centrifugal pump.



ENGINE DRIVE SPRINKLER PUMPS: A complete range of sizes and types—close coupled to engines of the air cooled and water cooled types.